Abstract of the Disclosure

A process for removing a contaminant from a surface. In the first step of this process, a liquid-state composition is applied to a surface comprising a contaminant. Next, the liquid-state composition is allowed to solidify into a solid-state matrix comprising the contaminant, thereby sequestering the contaminant. Finally, the solid-state matrix is removed from the surface, thereby decontaminating the surface. Also provided is a process for cleaning up a contaminant-containing spill in which a liquid-state composition is applied to the spill, physically mixed with the spill, and allowed to form a solid-state matrix. The matrix is then removed, thereby cleaning up the spill. A further process is provided for detecting a contaminant in a surface or spill, in which a contaminant-detecting compound is applied to a surface or spill and is allowed to react with the contaminant to produce a detectable change, thereby detecting the contaminant. A further process is provided for mitigating the toxicity of a contaminant in a surface or spill, in which a toxicity-mitigating compound is applied to a surface or spill and allowed to react with the contaminant to from a compound which is less toxic than the contaminant. Also disclosed is a process for accelerating the formation of a solid-state matrix from a liquid-state composition. In this process, a composition comprising a chemical drying agent is applied to the liquid-state composition.